ABSTRACT OF THE DISCLOSURE

An object of the present invention is to provide a process for a high-performance upflow anaerobic sludge treatment (methane fermentation treatment) targeting an organic wastewater containing an inorganic sulfur compound and an apparatus therefor.

The invention relates to a process for methane fermentation treatment of an organic wastewater containing a sulfur compound, which includes: detecting a concentration of hydrogen sulfide in a biogas generated from a step of methane fermentation treatment; and, conducting a control of subjecting the organic wastewater to a desulfurization treatment operation in the case that the concentration of hydrogen sulfide in the biogas exceeds a predetermined value, and to an apparatus therefor. It is preferred that the predetermined value of the concentration of hydrogen sulfide is from 1% to 4%, preferably from 1% to 2%, and the desulfurization treatment operation comprises adding a desulfurizing agent containing an iron ion so that a molar ratio of the iron ion to sulfur is from 0.05 to 1.